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ANDRUS, SCEALES, STARKE & SAWALL, LLP
100 EAST WISCONSIN AVENUE, SUITE 1100
MILWAUKEE, WI 53202

EXAMINER
LOEWE, ROBERT S

ART UNIT	PAPER NUMBER
1796	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/523,164	ALEXANDER ET AL.	
	Examiner	Art Unit	
	ROBERT LOEWE	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) *34-38* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/17/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's arguments/remarks, filed on 8/29/08, have been fully acknowledged. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

Claims 1, 3-5, 7-8, 11, 16, 18, 19, 21-23, 25-26 and 28-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Leroux et al. (US Pat. 5,252,454) as evidenced by Kerenya (US Pat. 6,935,137) and Coster et al. (US Pat. 6,979,662).

Claims 1 and 19: Leroux et al. teaches a flame resistant composition (3:42-62) comprising 10 to 85 weight % of a silicone polymer, 3 to 50 weight% of an intumescent compound, such as mica (2:62), and 2 to 40 weight% of hollow glass balls, preferably 6 to 25 weight% (1:64), which partially encompasses the range of instant claim 1. No other polymeric components other than silicones are taught by Leroux et al.; hence the polymer component consists essentially of a silicone polymer.

Claims 3-5, 7-8, 21-23 and 25-26: Leroux et al. teaches using soda lime glass which has a softening temperature of between 620 and 700 ° C, as evidenced by Kerenya (5:60-65), and has an alkali metal content ($K_2O + Na_2O$) of from 10 to 20 %, as evidenced by Coster et al. (1:24-30).

Claim 11: Leroux et al. teaches the composition (3:42-62) of instant claim 1 which consists essentially of a silicone polymer (10 to 85 weight %), a crosslinking agent (0.5 to 15%),

glass additive (2 to 40 weight %), and 3 to 50 weight % of an intumescent compound, such as mica (2:62).

Claims 16 and 18: Leroux et al. teaches a crosslinking agent such as tetraethyl silicate (3:22), which is also a silane coupling agent, and can be employed in amounts which encompass the range of instant claim 18 (3:54-55).

Claims 28-31: Because Leroux et al. teaches the flame retardant compositions of instant claim 1 and 19, it follows that the physical and chemical properties of the compositions of Leroux et al. would satisfy the physical and chemical property limitations of instant claims 28-31. A chemical composition and its properties are inseparable. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). See also *In re Best*, 562 F.2d 1252, 195 USPQ 430, (CCPA 1977). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established."

Claim 32: Leroux et al. further teaches that the fire-retardant compositions are used for window seals (1:8-15).

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leroux et al. (US Pat. 5,262,454) as applied to claims 1 and 19, and further in view of Cella et al. (US Pat. 4,833,190).

Leroux et al. teaches the composition of instant claim 1 as described above. Leroux et al. does not explicitly teach that additional fire retardant additives such as those of instant claims 9 and 27 may be added. However, Cella et al. teaches the addition of zinc borate (abstract). Leroux et al. and Cella et al. are combinable because they are from the same field of endeavor, namely, flame retardant compositions comprising a silicone matrix material. At the time of the invention, a person having ordinary skill in the art would have found it obvious to add zinc borate as taught by Cella et al. into the compositions as taught by Leroux et al. and would have been motivated to do so since Cella et al. teaches that zinc borate reduces smoke emission (abstract), a desirable trait for the compositions taught by Leroux et al.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leroux et al. (US Pat. 5,262,454) as applied to claim 1 above, and further in view of Hedrick (Mica, 1997, first published on the web on 8/24/2000).

Leroux et al. teaches the composition of instant claim 1 as described above. Leroux et al. does not explicitly teach that the mica which can be employed in the compositions can be either phlogopite mica or muscovite mica. However, a person having ordinary skill in the art recognizes that mica is not a single species but represents a class of minerals. Because of this, a person having ordinary skill in the art would have found it obvious to choose a specific type of mica, and based on the teaching of Hedrick, would have been motivated to choose either muscovite mica since it is abundant and has superior electrical properties, or phlogopite mica since it remains stable at high temperatures and is used where high heat stability is required.

Claims 14 and 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leroux et al. (US Pat. 5,262,454) as applied to claim 1 above, further in view of Sawada (JP 09-55125). For convenience,

Leroux et al. teaches the composition of instant claim 1, as described above. Leroux et al. does not explicitly teach the particle size of the mica which may be employed. However, a person having ordinary skill in the art would have found it obvious to turn to the relevant prior art for selection of the particle size of the mica filler. Sawada teaches a flame-retardant composition comprising a silicone rubber matrix and various flame-retardant fillers including mica, as shown in the table of the Sawada. Said document further teaches that the particle size of the mica is preferably from 100-300 microns (paragraph 0009), which substantially encompasses the range of instant claim 14 and 15. A person having ordinary skill in the art would have been motivated to select mica having the particle sizes taught by Sawada into the compositions as

taught by Leroux et al. since Leroux et al. teaches that the compositions with a reasonable expectation of success.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leroux et al. (US Pat. 5,262,454) as applied to claims 1 and 16 above, further in view of Matsumoto et al. (US Pat. 6,174,943).

Leroux et al. teaches the composition of instant claim 1 and further teaches the addition of a silane coupling agent of instant claim 16, as described above. Leroux et al. does not explicitly teach that the silane coupling agent is selected from the group of silane coupling agents of instant claim 17. However, Matsumoto et al. teaches a flame-retardant composition comprising mica in which the mica is treated with a silane coupling agent (6:58-64). Leroux et al. and Matsumoto et al. are combinable because they are from the same field of endeavor, namely, flame-retardant compositions. At the time of the invention, a person having ordinary skill in the art would have found it obvious to include a silane coupling agent, such as an epoxysilane coupling agent as taught by Matsumoto et al. into the compositions as taught by Leroux et al. and would have been motivated to do so because Matsumoto et al. teaches that the addition of a surface treatment agent increases adhesion between mica and the host resin and that an epoxysilane coupling agent in particular is preferred since it does not compromise the physical properties of the composition (6:58-64).

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leroux et al. (US Pat. 5,262,454) as applied to claims 1 or 19, and further in view of Beauchamp (US Pat. 5,227,586).

Leroux et al. teaches the composition of instant claims 1 and 19 as described above. Leroux et al. does not explicitly teach that the compositions taught therein can serve as insulating sheaths for electrical cables. However, Beauchamp teaches fire resistant compositions which are used in electrical cables. Leroux et al. and Beauchamp are combinable because they are from the same field of endeavor, namely, fire-resistant compositions. At the time of the invention, a person having ordinary skill in the art would have found it obvious to employ the fire-resistant compositions as taught by Leroux et al. as fire-resistant insulators for electrical cables and would have been motivated to do so since Beauchamp teaches that coating electrical cables with fire-resistant sheaths have a number of benefits and advantages and are required by Government regulations so as to ensure the safety of people in the event of fire (1:9-30).

Claims 1, 2 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landin (US Pat. 6,153,674).

Claims 1 and 2: Landin teaches a fire barrier material comprising a binder, such as silicone polymers (4:16), which may be present from 0.5 to 10 wt% (4:56-58), an intumescent compound such as mica (7:20), which may be preferably present in amounts from 9 to 75 wt% (7:32-36), which significantly overlaps with the range of instant claim 1, and a fiber, which may be an inorganic fiber, such as fiber glass/glass fiber (5:35), which is preferably present in amount of from 3 to 10 wt%, which substantially overlaps the range of instant claim 1. Further, the fiber

glass additives are taught to be a preferred fiber additive (17:65-18:1). While the teachings of Landin are not specific enough to warrant a case of anticipation, it is nevertheless obvious from the teachings of Landin to arrive at the limitations of instant claims 1 and 2, since silicone rubber, mica and glass fibers are each specifically mentioned. Further, the amounts of intumescent compound and fibers are taught to be within the ranges of instant claim 1.

Claims 7-8: The fiberglass additives taught by Landin are not taught to contain alkali metal oxides.

Claim 9: Landin further teaches the addition of endothermic compounds such as alumina trihydrate, zinc borate and magnesium hydroxide (8:43-51).

Claim 10: Since Landin teaches that glass frit may be added in amounts of up to 1%, it follows that such glass frits satisfy the limitations of the glass additive of instant claim 1. Further, the fiberglass additives taught by Landin serves the role of an inorganic fiber which does not melt at 1000 degrees C.

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landin (US Pat. 6,153,674) as applied to claim 1, and further evidenced by (http://www.chance-hunt.com/cepree/products/howitworks.htm).

Landin renders obvious the composition of instant claim 1, as described above. Landin further teaches that in addition to the glass fiber additives, further additives may be added in amounts of up to 1% by weight (10:42-48); such additives including glass frit (10:1-13). Landin further teaches exemplary glass frit includes glass frit commercially available under the trade name Ceepree 200. Ceepree 200 is shown to be a mixture comprising glass frits having a

softening point which satisfies the range of instant claim 6 as shown in the website http://www.chance-hunt.com/cepree/products/howitworks.htm. The suggestion to add glass frit to the fire barrier materials of Landin would lead to a composition wherein the glass additive is a mixture of glass frit and glass fiber as in instant claim 2.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landin (US Pat. 6,153,674) as applied to claim 1 above, and further in view of Hedrick (Mica, 1997, first published on the web on 8/24/2000).

Landin renders obvious the composition of instant claim 1 as described above. Landin does not explicitly teach that the mica which can be employed in the compositions can be either phlogopite mica or muscovite mica. However, a person having ordinary skill in the art recognizes that mica is not a single species but represents a class of minerals. Because of this, a person having ordinary skill in the art would have found it obvious to choose a specific type of mica, and based on the teaching of Hedrick, would have been motivated to choose either muscovite mica since it is abundant and has superior electrical properties, or phlogopite mica since it remains stable at high temperatures and is used where high heat stability is required.

Claims 14 and 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Landin (US Pat. 6,153,674) as applied to claim 1 above, further in view of Sawada (JP 09-55125). For convenience,

Landin renders obvious the composition of instant claim 1, as described above. Landin does not explicitly teach the particle size of the mica which may be employed. However, a person having ordinary skill in the art would have found it obvious to turn to the relevant prior art for selection of the particle size of the mica filler. Sawada teaches a flame-retardant composition comprising a silicone rubber matrix and various flame-retardant fillers including mica, as shown in the table of the Sawada. Said document further teaches that the particle size of the mica is preferably from 100-300 microns (paragraph 0009), which substantially encompasses the range of instant claim 14 and 15. A person having ordinary skill in the art would have been motivated to select mica having the particle sizes taught by Sawada into the compositions as taught by Landin since Sawada teaches that the compositions with a reasonable expectation of success.

Claims 19, 20 and 25-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landin (US Pat. 6,153,674) and further evidenced by (http://www.chance-hunt.com/cepree/products/howitworks.htm).

Claims 19 and 20: Landin teaches a fire barrier material comprising a binder, such as silicone polymers (4:16), which may be present from 0.5 to 10 wt% (4:56-58), an intumescent compound such as mica (7:20), which may be preferably present in amounts from 9 to 75 wt% (7:32-36), which significantly overlaps with the range of instant claim 1, and a fiber, which may be an inorganic fiber, such as fiber glass/glass fiber (5:35), which is preferably present in amount of from 3 to 10 wt%, which substantially overlaps the range of instant claim 1. Further, the fiber glass additives are taught to be a preferred fiber additive (17:65-18:1). While the teachings of

Landin are not specific enough to warrant a case of anticipation, it is nevertheless obvious from the teachings of Landin to arrive at the limitations of instant claims 1 and 2, since silicone rubber, mica and glass fibers are each specifically mentioned. Further, the amounts of intumescent compound and fibers are taught to be within the ranges of instant claim 1.

Claims 25-26: The fiberglass additives taught by Landin are not taught to contain alkali metal oxides.

Claim 27: Landin further teaches the addition of endothermic compounds such as alumina trihydrate, zinc borate and magnesium hydroxide (8:43-51).

Claims 28-31: Because Landin teaches the flame retardant compositions of instant claims 1 and 19, it follows that the physical and chemical properties of the compositions of Landin would satisfy the physical and chemical property limitations of instant claims 28-31. A chemical composition and its properties are inseparable. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). See also *In re Best*, 562 F.2d 1252, 195 USPQ 430, (CCPA 1977). "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established."

Claim 32: The fire barrier compositions taught by Landin may be in the form of sheets which may be used to secure articles such as conduits, cable trays, door frames, chemical tanks and isolation chambers (11:38-55).

Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landin (US Pat. 6,153,674) as applied to claim 19 and further evidenced by (http://www.chance-hunt.com/cepree/products/howitworks.htm).

Landin renders obvious the composition of instant claim 19, as described above. Landin further teaches that in addition to the glass fiber additives, further additives may be added in amounts of up to 1% by weight (10:42-48); such additives including glass frit (10:1-13). Landin further teaches exemplary glass frit includes glass frit commercially available under the trade name Ceepree 200. Ceepree 200 is shown to be a mixture comprising glass frits having a softening point which satisfies the range of instant claim 6 as shown in the website http://www.chance-hunt.com/cepree/products/howitworks.htm. The suggestion to add glass frit to the fire barrier materials of Landin would lead to a composition wherein the glass additive is a mixture of glass frit and glass fiber as in instant claim 2.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Landin (US Pat. 6,153,674) as applied to claims 1 or 19, and further in view of Beauchamp (US Pat. 5,227,586).

Landin teaches the composition of instant claims 1 and 19 as described above. Landin does not explicitly teach that the compositions taught therein can serve as insulating sheaths for electrical cables. However, Beauchamp teaches fire resistant compositions which are used in electrical cables. Landin and Beauchamp are combinable because they are from the same field of endeavor, namely, fire-resistant compositions. At the time of the invention, a person having ordinary skill in the art would have found it obvious to employ the fire-resistant compositions as taught by Landin as fire-resistant insulators for electrical cables and would have been motivated

to do so since Beauchamp teaches that coating electrical cables with fire-resistant sheaths have a number of benefits and advantages and are required by Government regulations so as to ensure the safety of people in the event of fire (1:9-30).

Relevant Art Cited

The prior art made of record and not relied upon but is considered pertinent to applicants disclosure can be found on the attached PTO-892 form.

Response to Arguments

Applicant's arguments with respect to the rejection of claims 2, 6, 9, 10, 20, 24 and 27 (Leroux et al. in view of Crompton) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection are made (vide supra).

Applicant's arguments regarding the rejection of claims 1, 3-5, 7-8, 11, 16, 18, 19, 21-23, 25-26 and 28-32 have been fully considered but they are not persuasive. Specifically, Applicants argue that Leroux et al. does not anticipate the invention because of a number of alleged deficiencies, which include the following:

(1) Applicants assert that Leroux et al. does not teach any criticality regarding the softening temperature of the hollow glass filler, unlike the instant invention,

(2) Applicants assert that Leroux et al. does not recognize or teach a composition which has the interaction between glass and mica called for by the instant invention,

(3) Applicants assert that Leroux does not appreciate the improvement in strength provided by the interaction between the mica and glass unlike the instant invention.

Regarding point (1), while Leroux fails to mention the criticality of the softening temperature of the hollow glass fillers, the employed glass fillers satisfy the softening point requirements of the claims. The fact that Leroux et al. does not place importance regarding the softening temperature of the glass additive does not diminish its anticipatory teachings.

Regarding points (2) and (3), the fact that Leroux et al. does not recognize or appreciate certain aspects of Applicant's invention does not disqualify the reference. Leroux et al. teaches the three claimed ingredients of independent claims 1 and 19. Preferred embodiments require the silicone rubber and the glass additive. While Leroux et al. does not employ mica in any preferred embodiments, a prior art reference may be relied upon for all that it teaches, including non-preferred embodiments. Further, the amount of intumescent compound which may be added substantially overlaps with the range of independent claims 1 and 19 while the amount of glass filler encompasses the range of independent claims 1 and 19 as well.

Applicant's arguments regarding unexpected results are valid only when a 103 rejection is made. Anticipatory art cannot be overcome by a showing of unexpected results. It should be pointed out that Applicants arguments regarding the 103(a) rejection of Leroux et al. in view of Crompton has been found to be persuasive and all rejections relying on this combination of references have been withdrawn.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Claim 2 has been amended in such a way that the scope of the claim has been broadened. Specifically, claim 2 now includes glass fibers, a limitation not previously presented. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT LOEWE whose telephone number is (571)270-3298. The examiner can normally be reached on Monday through Friday from 5:30 AM to 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-13021302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./
Examiner, Art Unit 1796
15-Oct-08

/Randy Gulakowski/

Supervisory Patent Examiner, Art Unit 1796